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**From:** [REDACTED]  
**Sent:** 2/28/2020 10:12:21 PM  
**To:** Theodore Oakley [toakley@globalinfotek.com]; William "Marty" Joyce [wjoyce@globalinfotek.com]  
**Subject:** Monthly Report  
**Attachments:** [REDACTED] Monthly Update 20200228.docx

Sir,

Please see attached.

Expense report for this week will follow shortly. Expense report for LA was already submitted. Invoice for hours will be in a separate email.

Very Respectfully,  
[REDACTED] Ph.D.



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*Excalibur-Jupiter Sentinel, February, 2020, Monthly Status Report*

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**1. (U) PURPOSE AND PROJECT OBJECTIVES**

This information is classified. Please refer to contract for more information.

**2. (U) APPROACH**

Provide advanced mathematics and software guidance to achieve strategic advantage.

**3. (U) ACCOMPLISHMENTS FOR THIS MONTH**

- Applied Math Research.
  - Initial theoretical prototype.
  - Continued evaluation of Adversarial Machine Learning papers.
  - Continued evaluation of Cloud AV papers.
  - Continued technical note “Enhanced Network Security Through Layered Protection”
- Tech Lead support:
  - Presented initial project results at February 11<sup>th</sup> PMR in Los Angeles, CA.
    - Travel expense report submitted.
  - Supported February 25<sup>th</sup> [REDACTED] project status review in San Antonio, TX.
  - Supported February 26<sup>th</sup> [REDACTED] and [REDACTED] demos for Pentagon officials. Meeting held in San Antonio, TX.
    - Travel expense report submitted.
  - Supported February 28<sup>th</sup> joint meeting with Sandia and other government partner in Laurel, MD.

**4. (U) PLANS FOR NEXT MONTH**

- Tech Lead support to Air Force SPO for February meetings in TX.
- Continue applied math research in Adversarial Machine Learning.

**5. RISKS/CHALLENGES**

None.

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**From:** Theodore M. Oakley [toakley@us.globalinfotek.com]  
**Sent:** 8/28/2020 1:48:22 PM  
**To:** MCVEIGH, WILLIAM M Capt USAF AFMC AFLCMC/HNCO [william.mcveigh.1@us.af.mil]  
**Subject:** [Non-DoD Source] Fw: PMR info  
**Attachments:** PMR [REDACTED].docx

Capt McVeigh,

As requested.

Regards,  
Ted Oakley

Theodore M. Oakley, Contractor  
Sr. Cyber Operations Program Manager  
Global InfoTek, Inc.  
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San Antonio, TX 78205  
PH: 210-557-5513



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**From:** [REDACTED]  
**Sent:** Thursday, August 20, 2020 7:50 PM  
**To:** Theodore M. Oakley <toakley@us.globalinfotek.com>  
**Subject:** PMR info

Ted,

Attached is the PMR info that you requested. Please let me know if this will be sufficient.

Very Respectfully,  
[REDACTED] Ph.D.

Topic: GiTi/ AF PMR

Period of performance: August 2019-August 2020

Summary of work performed:

- Performed research on machine learning (ML) and adversarial machine learning (AML) to enhance security of cyber-physical systems, protecting them from malicious behavior.
- Provided several numerical (matlab and python) prototypes applying ML to exemplar problems. These tools are designed to be “lite-weight”, enabling them to run on real-time systems with minimal compute resources.
  - ILP Lite is a lite-weight toolbox to solve a scheduling and traffic analysis problem using integer linear programming.
  - ENS Lite solves the network security problem through layered protection using advanced cascaded ML techniques to evaluate suspicious behavior.
  - MAI Lite solves the game-theory problem using multi-agent interaction.
- Presented results to the AF customer at several milestone program reviews.
- Documented software development and research results on private GitHub repos:
  - [https://github.com/AidedNav/network\\_security](https://github.com/AidedNav/network_security)
  - <https://github.com/AidedNav/ilpLite>
  - [https://github.com/AidedNav/network\\_flow](https://github.com/AidedNav/network_flow)